pupils presented him with a magnificent engraved portrait of himself in 1887; and at a dinner given in his honour by the Scientia Club in 1890, M. Charles Richet, who presided, referred to him as "the conqueror of the sea and apostle of zoology." His pupils and colleagues were, in fact, deeply sensible of his great services to science, and lost no opportunity of expressing their esteem.

Lacaze-Duthiers worked in his laboratory at Banyuls up to a few days of his death, and almost up to his last hour his faculties were engaged in the extension of scientific knowledge. He was the animating spirit of French zoology and the mentor of many living naturalists. He devoted his life and his means to science, and worked for her interests without regard for fatigue or considerations of age. In announcing his death to the Paris Academy of Sciences, which adjourned the meeting of July 22 to show regard for him, M. Fouqué, the president, remarked:—"Son esprit était ouvert à toutes les nouveautés scientifiques, sa parole claire et facile, son enseignement plein d'entrain. Il aimait la discussion et savait en faire jaillir la lumière. Il laisse parmi nous le souvenir d'un Confrère érudit et laborieux, doué d'une prodigieuse activité, habile à résoudre les problèmes compliqués que soulève l'organisation du règne animal."

Not only France, but the whole scientific world is poorer by the death of so great a naturalist.

NOTES.

WE regret to see the announcement that Prof. Baron von Nordenskjöld, the renowned Arctic explorer, died at Stockholm on August 12.

ACCORDING to the Copenhagen correspondent of the *Temps*, the two Nobel scientific prizes of 200,000f. have been awarded to Prof. Finsen, of Copenhagen, for his treatment of lupus by light, and the Russian physiologist, M. Pawloff, for his works on nutrition.

THE Fifth International Congress of Zoology was opened at Berlin on Monday in the buildings of the Reichstag, the interior of which has been arranged for the convenience of the members of the congress. In the absence of the Crown Prince, who is the patron of the congress, the foreign delegates were welcomed by Prof. Moebius, the president, who moved that the assembly should send a telegram expressing profound sympathy and regret to the Emperor of Germany. This proposal was seconded by Prof. E. Perrier, of Paris, and was unanimously adopted. A telegram expressing thanks for the sympathy was received from the Emperor on Tuesday. Other speakers at the opening meeting were the Chief Burgomaster of Berlin, Herr Kirchner, and the Rector of Berlin University, Prof. Harnack. The meetings will be held throughout this week, and the congress will be concluded on Sunday with a visit to the biological station on Heligoland.

THE annual awards of prizes by the Reale Accademia dei Lincei, of Rome, are as follows:—The Royal prize for chemistry has been adjudged to the late Prof. Amerigo Andreocci for his researches on heterocyclic compounds and on the santonine group, and other papers. The Royal prize for philosophy and moral science has been adjudged to the late Prof. Carlo Giussani. In political science and jurisprudence no award has been made, and the same is true of the Santoro prize relating to agricultural zoology. The two prizes instituted by the Minister of Public Instruction in favour of teachers in secondary schools for work in natural science have been divided, awards being given to Profs. Liberto Fantappiè (Viterbo), Antonio Neviani (Rome), De Toni (Venice), and Giacomo Trabucco (Florence). Two "Ministerial" prizes of a similar character for philosophical and social sciences are awarded to Profs. Luigi Einaudi (Turin) and Aurelio Covotti (Palermo). At the special meeting of the Accademia at which these awards were made, an obituary discourse on the late Prof. Angelo Messedaglia was given by Signor Luigi Luzzatti, and an address was read by Signor Gerolamo Boccardo on science and social progress. A list of Prof. Messedaglia's writings is appended to the former discourse in the *Rendiconti delle Sedute solenni* containing the report of the meeting.

THE twelfth annual general meeting of the Institution of Mining Engineers will be held at Glasgow on September 3-6 under the presidency of Sir W. T. Lewis, Bart.

A REUTER telegram from Geneva states that a meeting of the International Association of Botanists was held in the University there on August 7. A number of foreign universities and societies, including the Universities of Oxford, Cambridge and Glasgow, and Trinity College, Dublin, were represented.

THE Paris correspondent of the *Chemist and Druggist* states that with a view to give an impetus to the study of applied chemistry in Paris, it has been decided to build additional laboratories at the Conservatoire des Arts et Métiers. The initial expense is estimated at 500,000f. (20,000*l.*), and the annual upkeep at something over 3000*l.* The laboratories will also be used for experiments in physics and mechanics.

THE *Times* records that the German South Polar expedition sailed from Kiel on Sunday by the steamer *Gauss*. Herr Rothe, Imperial Under-Secretary of State for the Interior, thanked the members of the expedition in the name of the Emperor and of Germany, and hoped that their labours would meet with complete success. Prof. von Drygalski, the leader of the expedition, replied on behalf of the expedition.

THE balloon in which M. Santos Dumont made his recent trial trips has met with an accident which has placed it beyond repair, so a new one is being constructed and will be ready by September 1. The new balloon will have nearly the same volume as the one that came to grief on August 8—34 metres in length and 6 metres in diameter in the centre—but, instead of being cylindrical, it will be ellipsoidal in shape, and the *ballonet*, instead of being at one end, will be placed in the middle.

THE wireless telegraph station established on the Nantucket lightship by the *New York Herald* enables passengers by incoming vessels equipped with the Marconi instruments to enter into communication with the American Continent and through it with the whole world from fourteen to sixteen hours earlier than is the case at present. The installation of the station is rapidly approaching completion. The *Lucania*, which sailed from Liverpool on Saturday last, will be the first Transatlantic liner to greet the New World with a wireless message sent from a ship at sea.

THE *Pioneer Mail* of Allahabad states that as a consequence of the continued fall in prices, the area under indigo in the North-West Provinces of India is rapidly falling. In 1900 there was a slight and temporary recovery, but during the present year there has again been a very marked decline. According to the preliminary statement received from the village accountants, the total area sown with indigo up to the middle of April this year amounts to 119,313 acres, as compared with 188,645 acres returned last year; while that reported to be irrigated from canals up to the end of May last is 78,894 acres, against 162,298 acres returned last year. The decrease in the former area amounts to about 37 per cent., in the latter to 50 per cent.

THE Society of German Engineers has decided to prepare and publish the trilingual technical dictionary proposed a year ago, and circulars inviting cooperation have been sent to technical societies and engineers likely to assist the project with suggestions and lists of words. Dr. Hubert Jansen has been appointed editor of this "Technolexicon," and an editorial office has been established at Berlin (N. W. 7), 49, Dorotheenstrasse. The dictionary will appear in three volumes, namely: vol. 1, German-English-French; vol. 2, English-German-French; and vol. 3, French-German-English. To make the work as complete as possible, it is hoped that many collaborators will collect technical words and expressions and send to the editor those which do not occur in an ordinary dictionary. A note-book for setting down such uncommon words and expressions which crop up in connection with engineering work will be sent to persons who are willing to assist the project. These words are acceptable even if the equivalents in the two other languages are not known. The editor would also be glad to receive references to, or copies of, good special dictionaries, technological text-books, price-lists and catalogues referring to any branches of industry or handicraft. We suggest that the printed pocket-books used by electricians, engineers, surveyors, architects and others contain a large number of technical terms for which equivalents in French and German are difficult to find. It is not clear from the prospectus whether the dictionary will include technical terms used in physics and chemistry as well as those which belong to engineering. If not, it will sometimes be difficult to distinguish between scientific and engineering terms. For instance, electrochemistry is an industry, so its technical terms will be included in the dictionary; but it is also a science, and its scientific terms should also be included. If the scope of the dictionary is made sufficiently broad to cover physical as well as engineering science, the work should be of value to students of foreign scientific literature.

THE *Meteorologische Zeitschrift* for July contains a very interesting and comprehensive article by Prof. H. Ebert, of Munich, on the phenomena of atmospheric electricity, considered from the standpoint of the theory of ions, or carriers of positive and negative electricity, generated by the medium of radiation. The electrification of a gas has, especially since the discovery of the Röntgen rays, become a subject of fundamental importance, and has occupied the attention of several physicists, more particularly Messrs. Elster and Geitel, of Wolfenbüttel, and Mr. Wilson, of Cambridge, who have independently arrived at important and very similar results. They have also greatly improved the necessary apparatus and methods of measurement, by which means they have been able to show the connection between the electric conductibility of the air and artificially ionised gases. The following are some of the results deduced from the ionic theory. (1) The greater the solar radiation the less is the electric potential generally observed. (2) The ions generated at a great altitude are maintained for a certain time in the air and participate in its movements. (3) Dust, and especially aqueous vapour, obstruct the mobility of the ions, and therefore diminishes the conductibility of the air. (4) Negative ions move at greater speed than the positive. (5) The ions form condensation nuclei which, in the case of supersaturated damp air, are exhibited as fog or cloud; hence the negative ions are more suitable for forming nuclei than the positive. The subject of the condensation properties of ionised air has been carefully investigated by Mr. Wilson, and some of the results have been published in the *Philosophical Transactions* and other scientific papers.

MR. W. L. MOORE, chief of the U.S. Weather Bureau, has given an official opinion upon the value of cannonading as a means of preventing the fall of hail. The following extracts from the *Monthly Weather Review* show that he does not attach any importance to the Stiger method of bombardment, now so widely adopted in Italy, southern Austria and southern France:—"It consists essentially in sending vortex rings of smoke and air upward toward the clouds; but the most powerful Stiger cannon that have yet been employed do not send these rings higher than 1200 feet above the ground, and, therefore, utterly fail to reach the clouds. On this account the distinguished Austrian meteorologist, J. M. Pernter, has maintained that if there is any virtue whatever in the idea, the experimenters must use much more powerful apparatus. But there is no satisfactory evidence that the cannonading or the vortices had any influence whatever on the hail. Both theory and practice agree in this conclusion. Theoretically it was imagined by Mr. Stiger that hail is formed in quiet spots in the atmosphere where the atmospheric moisture could crystallise out in large crystals in a manner analogous to the formation of large crystals of salt in liquid solution. But this is a very foolish notion; there are no such quiet spots in the atmosphere, and hailstones are not crystals, but masses of ice, with only a feeble or partial crystalline structure. Even the perfect crystals of the snowflakes are formed in the midst of rapidly-moving air, so that the whole theoretical basis for hailstorm cannonading falls to the ground. . . . After examining all that has been published during the past two years, my conviction is that we have here to do with a popular delusion as remarkable as is the belief in the effect of the moon on the weather. The uneducated peasantry of Europe seem to be looking for something miraculous. They would rather believe in cannonading as a means of protection and spend on it abundance of money, time and labour, than adopt the very simple expedient of mutual insurance against the losses that must inevitably occur."

NO. 169 of the *Bulletin* of the French Physical Society contains a brief note on some experiments by Mr. L. Benoist on the transparency of bodies for Röntgen rays. The method adopted consists in plotting curves in which abscissæ represent atomic weights and ordinates represent the corresponding transparencies. In this way it is possible to establish the existence of a functional relation between the atomic weight and the transparency, and, further, to discriminate between different kinds of rays which give different curves.

Bulletin No. 98 of the U.S. Department of Agriculture consists of reports by Drs. Atwater and Sherman and by Mr. R. C. Carpenter on food consumption and metabolism, and on the mechanical efficiency of bicyclists. The experiments were made during a six days' bicycle race, and consisted in analytical determinations of the heat equivalent of the food consumed on the one hand, and estimates of the work done as deduced from calculations of air resistance and wheel resistance on the other hand. The experiments show, among other results, the great amount of easily-digested food required by the competitors, the greatly increased metabolism of nitrogen, the large amount of work done per day by the athletes in this competition, which averaged in one case more than ten million foot-pounds, or more than five times the average daily work of a man as estimated by Dr. Thurston, and, lastly, the high efficiency of the human subject as a motor, for which the authors obtain estimates ranging as high as 45 and 60 per cent. In regard to the accuracy of the determinations, a good deal of uncertainty must exist as to the amount of energy derived from combustion of body tissue by the bicyclists, and also as to the actual resistance overcome, which latter could best be determined by dynamometer observations. The determinations of the efficiency of the human subject have an interesting bearing on the question as to whether organic life is subject to the second law of thermodynamics or Maxwell's "demons" actually exist in the animal kingdom. We should also like to see dietary studies taken in periods of exceptional brain activity, as, for example, on subjects sitting for a competitive examination.

AN interesting and useful pamphlet has recently been issued by Mr. A. Hilger, containing full description and details of manipulation of the Michelson Echelon Grating. Many of the principal Universities of Europe have been provided with this very powerful means of spectroscopic determination, and the experience gained has been sufficient to permit the designing of a standard type of instrument. In this the thickness of each plate is 10 mm., and the width of each step 1 mm. The progressive precision in the working of the plates has enabled Mr. Hilger to avoid the considerable loss of light which was caused, in the original instruments, by the plates not being mechanically clamped together. They are now held in position by a screwed frame, which can be so adjusted that no distortion is perceptible, while the increase in brilliancy of the spectra is very noticeable.

WIRELESS telegraphy is in use upon ships engaged in the naval manœuvres, and it enables a battleship to communicate with a cruiser fifty or sixty miles away with greater ease than the same ship could be communicated with at a distance of ten miles in clear weather a year or two ago. But the *Times* special correspondent with one of the fleets remarks that the method, although independent of the weather, is still subject to one very serious drawback. The communication is not, and cannot be, a private or exclusive one, except so far as the messages are transmitted in cipher. Even so, every ship within range which is fitted with the necessary apparatus can take in the message, and if an enemy's ship is within range she can, by setting her own apparatus at work, break up the message and render it unintelligible. It is perhaps more politic to take it in clandestinely and work out the cipher—a thing which it is seldom very difficult to do and never altogether impossible if sufficient cipher material be obtained and sufficient time be devoted to the task. The moral is to employ as difficult a cipher as possible and to change it as soon as there is any reason to suspect the enemy has discovered it. But, even so, wireless telegraphy as at present practised is full of limitations and pitfalls which only experience can eliminate. It will never be quite satisfactory for war purposes until the transmitting instrument can be so adjusted as to emit vibrations of different pitch at the will of the operator and the receiving instrument rendered sensitive only to vibrations of a given pitch at a given moment. In that case, every ship in a fleet could have its own pitch and be sensitive only to messages addressed to itself in that particular pitch, while, unless an enemy within range happened to be attuned to the same pitch at the moment—a very unlikely contingency if the pitch were changeable at will—he would be powerless to intercept the message.

THE electrolytic dissociation theory of Arrhenius is severely criticised by Prof. Kahlenberg in a paper in the *Bulletin* of the University of Wisconsin (No. 47, February 1901), in which a great deal of experimental evidence in contradiction to the theory is brought forward. Prof. Kahlenberg has measured the conductivity of a number of electrolytes at 0° and 95° and calculated the degree of dissociation from these measurements as well as from determinations of the lowering of the freezing point and rise of the boiling point. The two sets of results he has thus obtained are far from concordant, from which he concludes that the dissociation theory is incorrect and doomed to early extinction. This theory, even though it has not met with universal acceptance, is not, we think, to be so easily overthrown, especially until some more satisfactory and fruitful alternative hypothesis is put forward to take its place. It is interesting to note that another American professor, Prof. H. C. Jones, of the Johns Hopkins University, is now contributing a series of valuable "Chapters in Electrochemistry" to the *Electrical Review* of New York, in which the subject is treated entirely from the point of view of the ionic theory, of which Prof. Jones is a vigorous adherent.

THE *Times* correspondent at Simla states that since the Pasteur Institute at Kasauli was opened a year ago, 321 patients have been treated, including 96 from the British Army and 50 European civilians. Not a single failure has occurred among the Europeans, but two natives died. Both of the latter had been badly bitten and arrived too late to be saved. The complete success of the Institute, which is under the charge of Major Semple, of the Army Medical Service, means a great saving to the Government, as soldiers need no longer be sent to Paris for treatment. It is hoped that funds will be provided to make possible the preparation of anti-toxins for enteric, snakebite and tetanus.

IT is a matter for regret when familiar names like Octopus have to disappear from the effective list, yet, according to Mr. Hoyle (*Manchester Memoirs*, xlv. No. 9), this must be replaced by Polypus on the ground of priority. In the same communication, the question is raised whether the name Histiopsis is preoccupied by Histiops—a point on which experts differ. In No. 4 of the same serial, Mr. Hoyle gives an instance of the danger of making genera and species on imperfect specimens. Part of a cuttlefish taken from a sperm-whale's stomach was referred to a new genus on account of its being apparently covered with regularly arranged quadrangular scales. Specimens recently acquired suggest that the appearance in question was due to decomposition.

THE secretary of the British South Africa Company has sent us a copy of the "Reports on the Administration of Rhodesia, 1898-1900," issued by the Company. One section is devoted to "Notes on the Fauna and Flora of North-eastern Rhodesia," by Mr. C. P. Chesnaye. From this we learn that the prospect of the survival in considerable numbers of the larger mammals and reptiles in the district to the west of Loangwa and in the swamps of Bangweolo and Mweru is very hopeful. The elephant is still met with in large herds, owing to its living for the greater part of the year in almost inaccessible swamps. The formation of a game-reserve to the east of Lake Mweru will probably largely aid in the preservation of this and other species, as it is believed that the elephants now hunted by Swahili traders to the south of Tanganyika will gradually retire to the reserve. Rhinoceroses are still fairly numerous, while hippopotamuses abound. The rinderpest which swept over the country in 1893 decimated the buffalo, eland and lichi antelope, but the country is gradually recovering from the scourge, and most districts are now very rich in game of all kinds, especially roan antelope, eland, Lichtenstein's hartebeest, puku, lichi and zebra. A few of the beautiful sable antelope still survive in the Mweru district, and around the north end of the lake the swamp-loving sitatunga antelope is plentiful. The rare sassabi hartebeest is restricted to a small area west of Lake Bangweolo. The dreaded tsetse-fly is stated to be prevalent in the valley of the Loangwa from the Zambesi to the confines of the Nyasa plateau, as well as in one other district, but to be absent from the greater portion of the Bangweolo country. Whether the latter part of the statement is true requires confirmation, but most of the territory seems free from "fly."

WE have received from the New Mexico College of Agriculture *Bulletin* No. 37, containing "Notes on the Food of Birds," by Mr. T. D. A. Cockerell. This is chiefly of local interest.

IN the *Bollettino* of the Italian Geographical Society, Signor Cesare Cipolletti continues his papers on the Argentine Republic, dealing with the regions of the Rio Negro and the Rio Colorado. Appended to a note on the Italian sphere of influence in Africa is a map showing the boundaries of the colony of Eritrea, compiled from official sources.

A PAPER by Herr S. Puchleitner in the *Mittheilungen* of the Vienna Geographical Society, on the glacial period in the Southern Carpathians, gives an excellent summary of recent research in this region, and more especially of de Martonne's valuable work on cirques. Dr. Kůr Hassert publishes an account of his journey through Montenegro during the summer of 1900, in the same number.

Petermann's Mittheilungen contains an article on the magnetic work to be undertaken by the German South Polar Expedition, by Dr. Bidlingmaier, the meteorologist and magnetician of the expedition. It includes the official programme of observations on the term days, and of the international scheme of cooperation, whereby it is hoped to obtain synoptic charts showing the magnetic condition of the whole globe on these days. Dr. Hans Gazert, the doctor of the Expedition, also contributes a paper on the bacteriological problems to be investigated.

A NUMBER of the *Abhandlungen* of the Vienna Geographical Society, just issued, contains a paper on the contrasts in climate on the east and west coast regions of continents in extra-tropical latitudes, by Dr. Ludwig Coellen. The author arranges the results of observations, chiefly obtained from tables published by Buchan, Hann and Woeikof, in such a way as to clearly bring out the salient points of difference; but it may be doubted if the selection of individual stations on which his generalisations are based is always satisfactory. We note that the direct influence of ocean currents is properly relegated to a secondary place.

IN a former paper on barisâl guns, &c., in the province of Umbria (*Boll. Soc. Sismol. Ital.*, vol. iii. 1897, pp. 222–234), Dr. Cancani attributes these phenomena to endogenous causes. He continues the subject in the last number of the same journal (vol. vii. 1901, pp. 23–47), describing similar noises which have been observed in the districts round Isernia and Cosenza and in Umbria and Latium. In the latter case he argues that the sounds were neither of artificial nor of atmospheric origin; and, as slight tremors were noticed in some instances to accompany them, his views receive considerable support from the recent observations.

MEMOIRS and notes upon many aspects of polar exploration are included in the "Antarctic Manual" prepared for the use of the members of the British Antarctic expedition. Mr. George Murray, F.R.S., is the editor of the manual, and Sir Clements Markham, K.C.B., contributes a preface in which he surveys the contents, and remarks that the volume "is presented to the expedition by the president and council of the Royal Geographical Society," so that the Royal Society is not officially concerned with the work. Among the subjects of papers in the volume are:—ice nomenclature, astronomical data, tidal observations, pendulum observations, terrestrial magnetism, climate, wave observations, the aurora, atmospheric electricity, chemical and physical notes, geology, volcanoes and volcanic action, ice observations, the collection of rocks and minerals, zoology, botany, sledge-travelling, geography, and an Antarctic bibliography. The manual thus contains in a compact form practically all that is known about South Polar regions, and also records of experience in Arctic exploration.

THE additions to the Zoological Society's Gardens during the past week include a Crab-eating Raccoon (*Procyon cancrivorus*) from South America, presented by Mr. George Lancefield; a Wild Swine (*Sus scrofa*) from Persia, presented by Mr. B. T. Ffinch; a Cardinal Grosbeak (*Cardinalis virginianus*), two Bluebirds (*Sialia wilsoni*) from North America, presented by Colonel Ashburner; a Golden Eagle (*Aquila chrysaetos*) from Scotland, presented by Mr. J. Monro Walker; two Stone Curlews (*Œdicnemus scolopax*), British, presented by Mr. A. E. Chaplin; an Orange-cheeked Waxbill (*Estrelda melpoda*) from West Africa, presented by Mr. W. S. Primley; a Kinkajou (*Cercoleptes caudivolvulus*) from South America, deposited; a Hoffmann's Sloth (*Cholopus hoffmanni*) from Panama, purchased.

OUR ASTRONOMICAL COLUMN.

ENCKE'S COMET.—A telegram sent out from Harvard College Observatory announces that the first observation of this periodic comet was made by Prof. Wilson at Northfield, on Monday evening, August 5.

The determination of position was as follows:—

R.A. = 6h. 2m. 2·8s. } (1901). August 5d. 9h. 25m. 3s.
Decl. = + 31° 42′ 30″ } G.M.T.

OBSERVATIONS OF MARS.—In the *Bulletin de la Soc. Astronomique de France* (1901, pp. 345–355), MM. Flammarion and Antoniadi give an account of their new observations of the planet Mars made at the Juvisy Observatory during the period 1900 October 23 and 1901 July 6. Two charts are given, one showing the northern hemisphere as a polar projection, the other giving the zone from +80° to −50° lat. on Mercator's projection.

Tables are given showing the varying dimensions of the North Polar snow-cap, which at the summer solstice had a diameter of about twenty degrees. The charts are described in detail, showing the differences from former observations. Attention is again drawn to the half-tone shading which apparently extends over the northern hemisphere from the pole to latitude 45°, limited towards the south by the region containing the canali.

At Juvisy, fifty canali have been seen, forty-six of which agree with the observations of Schiaparelli, and one from the list of Cerulli. Only three cases of gemination have been noticed, the most prominent being Cerberus and Casius, which were visible without difficulty. The Styx was also suspected of duplicity, but the components were not sharply separated.

VARIATIONS OF THE MAGNETIC NEEDLE.—M. Souleyre commences a discussion of the possible causes of the variations of the magnetic needle, and in his first article outlines the production of currents and other disturbances in the solar corona by the action of the planets, these reacting on the supposed electrical constitution of the corona and other solar surroundings. The extension of the theory to explain the periodicity of sunspots, terrestrial magnetic storms and auroræ is then presented, special attention being given to the effect of planetary disturbance (*Bull. Soc. Ast. de France*, 1901, pp. 362–370).

VARIATION OF EROS.—Supplementing his recent note, M. André furnishes a few further particulars concerning the form of light-curve and amplitude of the determined variation, in *Comptes rendus* (cxxxiii. pp. 324–326). When observed on the same evening, the minima of two orders were not quite identical. The form of the light-curve in the neighbourhood of the minima did not sensibly change during the observations, but a considerable degree of change has occurred about the points of maxima. A table is included showing the amplitudes of the variation observed on nineteen evenings during February, March and April, 1901, ranging from 2·0 magnitudes to zero.

ORBITS OF ALGOL VARIABLES, RR PUPPIS AND V PUPPIS.—Dr. A. W. Roberts has computed the characteristic features of the orbits of these two variables from observations secured at his private observatory, Lovedale, South Africa. Of the two variables, V Puppis is specially interesting from the fact that it is a spectroscopic binary, so that more refined measurements in the line of sight may possibly enable the absolute masses of the system to be determined.

RR Puppis.—

R.A. = 7h. 43m. 31s. } (1900·0).
Decl. = −41° 7′·6 }